

## ABSTRACT OF THE DISCLOSURE

A plasma processing system having a grounded chamber and an RF power feed connected to a bottom electrode is tested. A first capacitance between the bottom electrode and the grounded chamber is measured at atmosphere. Consumable hardware parts are installed in the chamber. A second capacitance between the bottom electrode and the grounded chamber is measured at vacuum with the grounded chamber including all of the installed consumable hardware parts. The first capacitance measurement and the second capacitance measurement are respectively compared with a first reference value and a second reference value to identify and determine any defects in the plasma processing system. The first and second reference value respectively are representative of the capacitance of a defect-free chamber at atmosphere and the capacitance of a defect-free chamber including all of the installed consumable hardware parts at vacuum.